

ATTACHMENT - CLAIMS LISTING

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Previously Amended) A method of identifying a person by fingerprint/toeprint recognition, ~~consisting in comprising the steps of:~~

- producing a digital photograph ~~(at 11)~~ giving having a digitized image ~~(13)~~ of a fingerprint/toeprint or part of a fingerprint/toeprint ~~(E)~~ present on a surface ~~(3)~~ of an object ~~(12)~~;
- analyzing ~~(15)~~ said digitized image of the fingerprint/toeprint;
- detecting characteristic points of the fingerprint/toeprint therein the digitized image;
- exchanging ~~(16)~~ the detected digital data of the detected characteristic points with a data bank ~~(17)~~ storing in which digital data of the characteristic points of a multiplicity of fingerprints/toeprints are stored in its a memory, said stored digital data corresponding to plane images of the multiplicity of fingerprints/toeprints;
- comparing ~~(18)~~ the detected digital data of the abovementioned detected characteristic points with the digital data stored in the memory of the data bank; and
- identifying a person possessing having said fingerprint/toeprint as a result of the above ~~comparison~~ comparing step.

said method further comprising, characterized, when where the fingerprint/toeprint ~~(E)~~ is present on a curved surface ~~(3)~~, the steps of

- selecting a pre-established model of a curved semicylindrical or semiconical surface of revolution having a shape corresponding or close to the a shape of the curved surface or of a portion of the curved surface, to on which the fingerprint/toeprint is fixed present, is selected,

- sending information about the respective positions of the two diametrically opposed generatrices of the curved surface which are visible in the digitized image is sent to an algorithm processing device, whereby the algorithm processing device deduces from the information relevant geometrical characteristics of the curved surface, and

- transforming, using the algorithm processing device for a plane projection, the digitized image into a corrected digitized image with a distortion level below a predetermined threshold, by projecting it onto a plane using said algorithm processing means, said corrected digitized image showing the characteristic points of said fingerprint/toeprint in a plane,

whereby said plane corrected digitized image is used for detecting the characteristic points of the fingerprint/toeprint in the detecting step and for identifying the person in the indentifying step.

2. (Previously Amended) The method as claimed in claim 1, characterized wherein that the transforming step includes the step of associating, by use of the algorithm processing means associate device, with each point in the initial digitized image of the curved fingerprint/toeprint rolled up present on the curved surface, with a projected point lying in a projection plane such that the linear distance of said projected point in the projection plane relative to the projection of the axis of said curved surface is equal to the curvilinear distance of said the point in the initial image relative to the projection of said axis onto said curved surface.

3. (Previously Amended) The method as claimed in claim 2, characterized wherein that said transforming step includes, at any point {P} in the projection plane, determining with the algorithm processing means device determine a projected point {P₁} such that:

$$O_1 \cdot P_1 = r \cdot \cos(\pi/2 - O_1 \cdot P/r)$$

where O₁ is being the projection of the axis of the curved surface onto said projection plane, and

where r being is the an estimated radius of the curved surface, and then associating associate with the projected point {P₁} in the plane, with a point {P₂} on the curved surface, such that the projected point {P₁} of which is the projection of the point P₂ on the projection plane.

4. (Currently Amended) The method as claimed in claim 1, ~~characterized in that, if~~
where the fingerprint/toeprint (E) is found affixed to present on a surface of complex
shape,

wherein said transforming step includes the steps of

breaking the digitized image (3) of said surface of complex shape is broken down
into partial images (3a, 3b, 3c) of surfaces of simple shape,

processing in that each partial image (2Aa, 2Ab, 2Ac) is processed in relation to
the shape of the respective surface in order to obtain corrected partial images (213a,
2Bb, 213c) and

juxtaposing in that the corrected partial images are juxtaposed so as to obtain a
corrected full image of the fingerprint/toeprint as like a mosaic.